

HTIRC-02-021



April 18, 2006

To: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, NY 12603

Subject: Serial No. 10/786,806 02/25/04

Kunliang Zhang et al.

CPP GMR AND MAGNETOSTRICTION
IMPROVEMENT BY LAMINATING Co₉₀Fe₁₀
FREE LAYER WITH THIN Te₅₀Co₅₀ LAYERS

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation In An Application.

The following Patents and/or Publications are submitted to comply with the duty
of disclosure under CFR 1.97-1.99 and 37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States
Postal Service as first class mail in an envelope addressed to: Commissioner for Patents,
P.O. Box 1450, Alexandria, VA 22313-1450, on April 25, 2006.

Stephen B. Ackerman, Reg. # 37761

Signature/Date

 4/25/06

05/01/2006 WABDELRI 00000030 190033 10786806

01 FC:1806 180.00 DA

The Commissioner is hereby authorized to charge the IDS Processing Fee of \$180, under 37 CFR 1.17(p), to Deposit Account No. 19-0033. A duplicate copy of this sheet is enclosed.

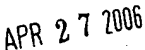
“The scalability of CPP-GMR heads toward over 100Gbps, compared with TMR heads,” by M. Takagishi et al., Toshiba, TMRC2001, August 20, 2001, investigates the scalability of CPP-GMR heads toward over 100Gbps, compared with TMR heads.

“Output enhancement of spin-valve giant magnetoresistance in current-perpendicular-to-plane geometry,” by H. Yuasa et al., Journal of Applied Physics, Vol. 92, No. 5, Sept. 1, 2002, pp. 2646-2650, presents a suitable material for metal-based spin-valve in current-perpendicular-to-plane (CPP) geometry.

Sincerely,

A handwritten signature in black ink, appearing to read 'SBA', with a long horizontal flourish extending to the right.

Stephen B. Ackerman,
Reg. No. 37761



Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

(Use as many sheets as necessary)

Complete if Known

Application Number	10/786,806
Filing Date	02/25/04
First Named Inventor	Kunliang Zhang
Art Unit	
Examiner Name	
Attorney Docket Number	HTIRC-02-02

Sheet

of

Attorney Docket Number

HTIRC-02-02

U. S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (07-05)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	10/786,866		
		Filing Date	02/25/04		
		First Named Inventor	Kunliang Zhang		
		Art Unit			
		Examiner Name			
Sheet		of		Attorney Docket Number	HTIRC-02-021

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		"The scalability of CPP-GMR heads toward over 100 Gpsi, compared with TMR heads", by M. Takagishi et al., TMR 2001, Aug. 24 2001, Toshiba.	
		"Output enhancement of spin-valve giant magnetoresistance in current-perpendicular-to-plane geometry", by H. Yasa et al., J. Appl. Phys., Vol. 92, No. 5, Sept. 1, 2002, pp. 2646-2650.	

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.